

Baby talk: The roots of the early vocabulary in infants' learning from speech

October 30 2008

Although babies typically start talking around 12 months of age, their brains actually begin processing certain aspects of language much earlier, so that by the time they start talking, babies actually already know hundreds of words. While studying language acquisition in infants can be a challenging endeavor, researchers have begun to make significant progress that changes previous views of what infants learn, according to a new report by University of Pennsylvania psychologist Daniel Swingle. The report, published in the October issue of *Current Directions in Psychological Science*, a journal of the Association for Psychological Science, describes an increasing emphasis among researchers in studying vocabulary development in infants.

Infants have a unique ability to discriminate speech-sound (phonetic) differences, but over time they lose this skill for differentiating sounds in languages other than their native tongue. For example, 6 month old babies who were learning English were able to distinguish between similar-sounding Hindi consonants not found in English, but they lost this ability by 12 months of age. Since the 1980s it has been known that infants start focusing on their language's consonants and vowels, sometimes to the exclusion of non-native sounds. More recently, researchers have increasingly focused on how infants handle whole words.

Recent research has shown that during infancy, babies learn not only individual speech sounds but also the auditory forms of words; that is, babies are not only aware of the pieces that make up a word, but they are

aware of the entire word. These auditory forms of words allow children to increase their vocabulary and help them to eventually develop grammar. Although they may not know what the words mean, children as early as 8 months start learning the phonological (sound) forms of words and are able to recognize them—and just being familiar with the words helps increase the children's vocabulary. Studies have shown that 18 month old children who are familiar with a word's form are better at learning what it means and are also able to differentiate it from similar sounding words.

Knowing word forms may also contribute to children's inferences about how their language works. For example, 7.5 month olds do not recognize words as being the same if they are spoken with different intonations or by a man and a woman. However, by 10.5 months of age, babies recognize the same words despite changes in the speaker or the intonation used. Another interesting finding was that although children learning a language can distinguish between long and short vowels, they interpret this difference according to the rules of their language. For instance, Dutch 18-month-olds considered *tam* and *taam* to be different words, while English 18-month-olds did not—showing children's early learning of how each language uses vowel length.

How can researchers find out what young children know about words and the forms of words while children have only just begun to talk? One method takes advantage of the fact that even young toddlers like to look at images or objects that we name. In these experiments, the children's eye movements are tracked while they are looking at two objects (for example, an apple and a dog). The researcher will say the name of one of the objects and see if the child's eyes move to that object. In this way, researchers can change the sound of the words slightly (for example, instead of "dog" say "tog") and see if the baby will look at the dog the same amount, as if indifferent to the change, or less, as is the case with adults who know that "dog" cannot be said as "tog." The results of those

studies showed that the children were less likely to look at the correct object when it was mispronounced, indicating that by one year of age, children are able to recognize mispronunciations of words.

This new research in language acquisition indicates that infants learn the forms of many words and they begin to gather information about how these forms are used. The author notes that "these word forms then become the foundation of the early vocabulary, support children's learning of the language's phonological system, and contribute to the discovery of grammar."

In addition, there is a relationship between young children's performance in word recognition and their later language achievement. The author concludes that "testing very young children's ability to interpret spoken language, whether by identifying novel words as novel or by comprehending sentences, may prove a more sensitive predictor of children's language outcomes than simpler tests of speech-sound categorization."

Source: Association for Psychological Science

Citation: Baby talk: The roots of the early vocabulary in infants' learning from speech (2008, October 30) retrieved 25 April 2024 from <https://medicalxpress.com/news/2008-10-baby-roots-early-vocabulary-infants.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--